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EXAMINER
BIAGINI, CHRISTOPHER D

ART UNIT	PAPER NUMBER
2142	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/613,905	HARVILLE ET AL.
	Examiner	Art Unit	
	Christopher D. Biagini	2142	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>06 August 2007</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-24</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-24</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments, filed August 6, 2007, with respect to the rejection(s) of

claim(s) 1-2, 5-10, 13-14, and 17-22 under 35 USC 102(e) have been fully considered

and are persuasive. Therefore, the rejection has been withdrawn. However, upon

further consideration, a new ground(s) of rejection is made.

Applicant's amendments to claims 1, 10, and 22 are sufficient to overcome the

objection to those claims. Accordingly, the objection is withdrawn.

Applicant's amendments to claims 11, 12, 23, and 24 are sufficient to overcome

the rejections of those claims under 35 USC 112, second paragraph. Accordingly, the

rejections are withdrawn.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lai

(US Patent No. 6,407,680) in view of Wei Tsang Ooi et al. ("Distributing Media

Transformation Over Multiple Media Gateways," hereinafter "Ooi").

Regarding claim 1, Lai shows a method for managing a streaming media service,

said method comprising:

- receiving a request for a streaming media service from a client (see step 502

  in Fig. 5A and col. 14, lines 42-44), said streaming media service comprising

  a plurality of media services components (comprising transcoding,

  transmitting, and streaming: see Fig. 2);

- determining which media service component of said plurality of media

  services components to assign to a service node of a plurality of service

  nodes (the nodes comprising machines in machine farm 216: see col. 15,

  lines 43-50) of a network (for example, a packet-switched computer network:

  see Fig. 1 and col. 8, lines 11-16); and

- informing each service node assigned to perform a media service component

  of said plurality of media services components (comprising assigning a task to

  a machine: see step 512 and col. 15, lines 38-43), enabling said streaming

  media service to be performed on a streaming media (see steps 516-524 in

  Fig. 5B and col. 16, lines 46-49).

Lai does not explicitly teach reassigning the determined media service

component to a different service node selected from the plurality of service nodes while

continuing to provide the streaming media to the client.

Ooi shows reassigning a determined media service component to a different

service node selected from a plurality of service nodes while continuing to provide

streaming media to a client (see full paragraphs 1-5 on page 163).

It would have been obvious to one of ordinary skill in the art at the time of the

invention to modify the system of Lai with the service component handoff taught by Ooi

in order to adapt to network environment changes (see first paragraph under secion 3.1

on page 162).

Regarding claim 13, Lai shows a system for managing a streaming media

service, said system comprising:

- a plurality of service nodes (comprising the machines in machine farm 216:

  see col. 15, lines 43-50) for performing a streaming media service on

  streaming media, said streaming media service comprising a plurality of

  media services components (comprising transcoding, transmitting, and

  streaming: see Fig. 2);

- a client for requesting said streaming media service (client 102);

- a manager (resource manager 208) coupled to said plurality of service nodes

  of a network and said client and for determining which service node to assign

  to perform each media service component of said plurality of media services

components (comprising assigning a task to a machine: see step 512 and col.

15, lines 38-43); and

- a service builder (task manager 206) coupled to said manager and for

  communicating a list of said plurality of media services components to said

  manager (the list comprising a set of tasks: see step 510 and col. 15, lines

  27-38).

Lai does not explicitly teach reassigning the determined media service

component to a different service node selected from the plurality of service nodes while

continuing to provide the streaming media to the client.

Ooi shows reassigning a determined media service component to a different

service node selected from a plurality of service nodes while continuing to provide

streaming media to a client (see full paragraphs 1-5 on page 163).

It would have been obvious to one of ordinary skill in the art at the time of the

invention to modify the system of Lai with the service component handoff taught by Ooi

in order to adapt to network environment changes (see first paragraph under secion 3.1

on page 162).

Regarding claims 2 and 14, Lai in view of Ooi shows the limitations of claims 1

and 13 as applied above, and further shows wherein said streaming media is selected

from video, audio, multimedia, and text (see Table 1 on columns 18-20).

Regarding claims 3 and 15, Lai in view of Ooi shows the limitations of claim 1 as applied above, but does not show wherein said determining is based on location of said client.

Ooi shows assigning a media service component to a service node based on the location of a client (comprising assigning a computation that increases bit-rate to a gateway near the receiver: see last paragraph of Introduction).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Lai in view of Ooi with the determination process of Ooi in order to minimize bandwidth consumption.

Regarding claims 4 and 16, Lai in view of Ooi shows the limitations of claim 1 as applied above, but does not show wherein said determining is based on bandwidth of said network.

Ooi shows assigning a media service component to a service node based on bandwidth of a network (comprising using an entity to transform media streams into lower bit-rates for slow links: see first paragraph of Introduction).

It would have been obvious to one of ordinary skill in the art to modify the invention of Lai in view of Ooi with the determination process of Ooi in order to provide a better user experience to users of slow communication links.

Regarding claims 5 and 17, Lai in view of Ooi shows the limitations of claims 1 and 13 as applied above, and further shows wherein said determining is based on load on said network (the load comprising "network congestion": see col. 15, lines 50-53).

Regarding claims 6 and 18, Lai in view of Ooi shows the limitations of claims 1 and 13 as applied above, and further shows wherein said determining is based on load on each service node of said plurality of service nodes (the load comprising CPU utilization: see col. 15, lines 43-50).

Regarding claims 7 and 19, Lai in view of Ooi shows the limitations of claims 1 and 13 as applied above, and further shows wherein said determining is based on an existing streaming media service on said network (comprising using software residing on content provider client 104 instead of a transmitting server in machine farm 216: see col. 10, lines 44-49).

Regarding claims 8 and 20, Lai in view of Ooi shows the limitations of claims 1 and 13 as applied above, and further shows wherein said determining is based on a previously assigned media service component (comprising not assigning a transcoding server when one had previously been assigned for a particular set of media content: see col. 11, line 65 to col. 12, line 6).

Regarding claims 9 and 21, Lai in view of Ooi shows the limitations of claims 1

and 13 as applied above, and further shows wherein said receiving said request is

through a service portal (viewer web-server interface 202: see Fig. 2 and col. 14, lines

42-44).

Regarding claims 10 and 22, Lai in view of Ooi shows the limitations of claims 1

and 13 as applied above, and further shows wherein each of said plurality of service

nodes generates an input communication socket and an output communication socket

to enable communication between assigned service nodes (inherently disclosed as

being a necessary part of the process by which the servers receive and send data from

other servers, as it is necessary to create input and output sockets to receive and send

data over a network). See col. 10, lines 19-33 and col. 16, line 46 to col. 17, line 60.

Note that in addition to enabling communication between assigned service

nodes, the input and output communication sockets enable retrieving media content and

sending it to a viewer client. See col. 15, lines 30-35.

Regarding claims 11 and 23, Lai in view of Ooi shows the limitations of claims 10

and 22 as applied above, but does not explicitly show wherein said input communication

socket enables decompressing said streaming media.

Ooi shows a group of assigned service nodes (comprising media gateways: see

Fig. 1A), each of which has generated a module for receiving and decompressing

streaming media (note that as described in 1.4, each gateway must have software to

decompress a media stream).

It would have been obvious to one of ordinary skill in the art to modify the

invention of Lai in view of Ooi with the media gateways and modules of Ooi in order to

distribute the load of transcoding media among multiple devices. See paragraph 3 of

section 1.1.

Regarding claims 12 and 24, Lai in view of Ooi shows the limitations of claims 10

and 22 as applied above, but does not explicitly show wherein said input communication

socket enables decompressing said streaming media.

Ooi shows a group of assigned service nodes (comprising media gateways: see

Fig. 1A), each of which has generated a module for compressing and sending

streaming media (note that as described in 1.4, each gateway must have software to

compress a media stream).

It would have been obvious to one of ordinary skill in the art to modify the

invention of Lai in view of Ooi with the media gateways and modules of Ooi in order to

distribute the load of transcoding media among multiple devices. See paragraph 3 of

section 1.1.

Conclusion

The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure:

- Fu et al. ("CANS: Composable, Adaptive Network Services Infrastructure") shows a streaming media service which can switch service components to different nodes while continuing to provide streaming media to a client.

- Ooi et al. ("An Adaptive Protocol for Locating Programmable Media Gateways") provides further detail for the ALGP algorithm described in the paper "Distributing Media Transformation Over Multiple Media Gateways" cited above.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher D. Biagini whose telephone number is (571)

272-9743. The examiner can normally be reached on weekdays from 8:30 AM to 5:00 PM..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on (571) 272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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SUPERVISORY PATENT EXAMINER

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